

# THE MEDICAL EXAMINER,

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### SEVERE INJURY OF THE ABDOMEN, WITH PROTRUSION OF THE INTESTINES, FOLLOWED BY RECOVERY.

BY HATTERSLY P. WORTHINGTON, M. D.

To the Editor of the Medical Examiner.

SIR:—Having read in the number of your journal for January 27, a communication from Prof. Dunglison, with the observations of Dr. Blundell upon abdominal surgery, I am induced to send you the following sketch of a case which lately came under my observation, and which forcibly illustrates the truth of Dr. B.'s conclusions as to the peritoneum, under severe injury to the abdomen. I regret that my report must be extremely imperfect, as I write entirely from memory; yet as the case possesses much interest, I am unwilling to withhold its publication.

Nov. 8th, 1843, I was called to John Newcomb, labourer in the iron mines, ætat. 40, tall, robust, healthy, and of steady habits. He was lying in a shanty or cabin an eighth of a mile from the bank. The account given me was, that about thirty minutes before I saw him he was engaged in shovelling earth into a cart, when a portion of the perpendicular bank, beneath which he was working, caved in, falling upon his legs, and projecting his abdomen against the tail of the cart; the horse at the same time starting forward lessened the force of concussion. He was conveyed on a board to the cabin where I found him. Before removing his clothes I perceived a portion of the intestines and mesentery, comprising about 15 inches of the colon, and 30 of the small bowel, protruding from a wound in the right groin, and lying upon the upper part of the thigh. Raising this mass, I perceived a wound extending along the whole course of Poupart's ligament, and downwards an inch between the genital organs and thigh; the edges of this wound were clean and uncontused, as though cut with the scalpel: the intestines showing no marks of violence. This wound was evidently produced by the contraction of the abdominal muscles during the fall.

A little to the left and below the umbilicus, there was a smaller wound, from which a small fold of the intestine presented itself. The edges and neighbourhood of this gave evidence of direct violence from the cart. The patient complained of no pain or uneasiness excepting an oppression in the region of the stomach, which spontaneous vomiting relieved by evacuating his dinner; the pulse about 70, full and soft.

I proceeded to reduce the intestines, in which I succeeded with no difficulty; bringing the wound together by the quilled suture, making three stitches at the distance of two inches apart. The smaller wound I closed by a few adhesive strips. The dressing, which occupied considerable time, caused my patient but little suffering. I had given him 50 minims (drops?) tinct. opii, and his pulse was less frequent than when I commenced.

There appeared at the wound hæmorrhage internally, though he gave no evidence of its being considerable.

My dressings were necessarily imperfect, not having immediately at command all things requisite for this purpose. The miserable accommodations, or rather want of accommodations, and the exposed situation of the shanty, afforded my patient but a poor prospect for the essentials to his condition, even should he fortunately escape the dangers of the first few hours.

Having before me less dread of any peritoneal inflammation, than the debilitating effects of so large a suppurating wound, I wished to pursue a course of treatment which, whilst it should spare my patient's strength, should be adequate against any peritonitis that might occur. I concluded to refrain from any violent prospective anti-phlogistics, and taking advantage of his present condition, I determined to keep my patient under the sedative influence of opium and refrigerants. On the 10th there was a slight tympanitis and tenderness, with increased thirst, and harder pulse, but these symptoms yielded rapidly to fomentations to the abdomen. The bowels were now, for the first time, moved by enema.

On the 11th, the patient was easy, surface cool and moist, pulse 60, regular and full; he sleeps well and soundly during the night.

On the 12th, he was removed by my directions to the Baltimore Infirmary, a distance of 10 miles, where, under the care of the distinguished Professor of Surgery of the University of Maryland, he has advanced rapidly to recovery.

The sketch I have given will serve to illustrate the question under consideration, and will furnish another evidence in favour of Dr. Blundell's views. That an abdominal wound of 8 inches in length, beside the smaller one, under such unfavourable circumstances, should have given rise to inflammation at no time requiring the abstraction of a single ounce of blood, is certainly a paradox to many of our profession.

A determination of what is "the rule," and what "the exception in such cases," would tend to impart a most useful confidence in this most important department of surgery. I presume there are many other young surgeons who, with myself, have had melancholy cause to deplore their early acquired dread of this bugbear peritonitis: and have found, when too late, that they have opened their heavy battery of anti-phlogistics against an imaginary foe.

Elkridge Landing, Md., Feb. 18, 1844.

### NITRATE OF POTASS IN ASTHMA.

A correspondent of the New York Med. Gaz., says that he has derived essential benefit from using the following remedy in severe attacks of asthma, and has prescribed it for several patients with equal success:—Immerse thick porous paper in a saturated solution of nitrate of potass, or common saltpetre, and hang it up to dry. At the approach of a paroxysm, inhale the vapour by burning it in the room, or smoking it in a tobacco-pipe.



## CLINICAL LECTURES AND REPORTS.

JEFFERSON MEDICAL COLLEGE.

December 13, 1843.

CLINIC OF PROFESSOR MÜTTER.

(Reported by H. T. Child.)

Continued from last number.

## CASE V.—ANCHYLOBLEPHARON AND SYMBLEPHARON.

This patient, some months since, while engaged in casting iron, was severely burned in the face and eyes, by a portion of the heated metal being accidentally thrown upon him. The left eye suffered most, and the inflammation ran so high, as not only to destroy vision, but also to occasion adhesion between the lids, (anhyloblepharon,) and between the lids and ball, (symblepharon.) These adhesions are, as you perceive, very close and strong, and it is impossible to introduce a probe between the lids and ball. The prognosis in such a case is exceedingly unfavourable; for, although we can readily divide the adhesions, yet such is the disposition to reunion, that we find it almost impossible to maintain the parts separated a sufficient length of time for cicatrization to take place. As the patient is anxious that something should be done, I will perform the usual operation of dissecting the lid from the ball, and then, in order to prevent union between the raw surfaces, shall pass a probe between them daily. It will also be well to touch the parts every day with nitrate of silver, either in solution or solid form.—Should we succeed in preventing the adhesions from re-forming, we may then introduce an artificial eye, and the deformity will at once be removed. Where the adhesions are composed of small fræna, or bands, simple division, followed by the use of the nitrate of silver, will generally relieve the deformity. The operation was then performed.

## CASE VI.—LACERATED WOUND OF THE EAR.

In a riot among the firemen a night or two since, this man was thrown down, and while held by several persons, some one took upon himself the task of *biting off his ears*. By great good fortune, the attack was arrested after the left ear had been operated on, and before any violence could be inflicted upon the right. You perceive that what remains of the injured organ is very much inflamed, while the adjacent soft parts are in a state of erysipelas. The wound is rough and jagged, and very painful. It would be highly improper, in the present condition of the parts, to attempt any operation for the relief of the deformity occasioned by the loss of a portion of the ear, and we cannot hope to obtain either mediate or immediate union of the edges of the wound; we must therefore get down the inflammation, and then ascertain what plan will most effectually relieve the defect. To accomplish this indication, we shall order the abstraction of  $\frac{1}{3}$  xij. of blood from the arm, a brisk cathartic, low diet, and the warm water dressing to the wound.

When a portion of the ear has been removed by a clean cut, and the parts are not lacerated, and we are called immediately after the reception of the injury, we should always stitch on the separated parts, apply the cold or warm water dressing, and endeavour to obtain reunion. Any such attempt, when the parts

are much lacerated, would prove utterly useless, as sloughing must inevitably ensue.

## CASE VII.—CHRONIC HYDROCEPHALUS.

We have here a most distressing example of that almost indomitable disease, hydrocephalus; but as you have already, in another place, had the peculiarities of the disease pointed out, I shall barely refer to the treatment of the case before us. What is to be done for this child? The usual remedies have already been administered, but without producing any relief; the head is gradually increasing in size; the fontanelles are daily enlarging; convulsive spasms are frequent; the strabismus is perfect, and consciousness very much impaired. The prognosis is therefore very unfavourable; yet it is our duty to do something, "*anceps remedium melius est quam nullam*," and what promises most? The *Indian hemp in infusion*. My attention was directed to this article, as a useful remedy in hydrocephalus, by Dr. Barrow, of New York, a most excellent and experienced physician, whom I met last summer, and since that time I have used it with decided advantage in two cases. Should this fail, and the head continue to increase in size, I shall perform, as a "*dernier resort*," paracentesis capitis, as recommended by Conquest and others, and which you saw performed at the clinic a few days since by my colleague, Prof. Pancoast. My confidence in this operation, however, is but slight; for although it has unquestionably, in several cases, proved useful, yet, in the majority, it has signally failed.

## CASE VIII.—CONGENITAL CLUB-FOOT.

G. A., a child two years of age, exhibits the deformity known as *varus*. Both feet are involved, and the defect belongs to what I have termed, in my classification of these malformations, *varus in its third degree*. I cannot, at this time, do more than refer you to my lecture upon this subject for any information relative to the causes, complications, pathology, and treatment of similar cases. There is rarely, if ever, any difficulty in curing a child of this age by *mechanical measures alone*; but occasionally the integuments are so feeble, that the least pressure produces excoriation, or the tendon is so rigid, that a long time must elapse before its elongation can be accomplished by machinery; and when these obstacles present themselves, tenotomy will often prove useful. Before I had as much experience in the treatment of this disease as I now have, and when I was obliged to rely upon the statement of others, it was my rule to operate in all such cases as the present. I have found, however, that in *young persons*, it is as well to try a simple apparatus first, and, if this fails, we can assist it by tenotomy. (The apparatus of Dr. Mütter was then applied.)

## PHILADELPHIA HOSPITAL.

CLINIC OF THE JEFFERSON MEDICAL COLLEGE.

February 3, 1844.

BY PROFESSOR DUNGLISON.

(Reported by E. R. Squibb, and Samuel G. White.)

## HEMIPLEGIA.

The attention of the class was first directed to two cases of hemiplegia, which had, on a former occasion, excited their interest. They were presented now merely to exhibit the existing condition, and to report



their progress. One is improving gradually, although apprehensions of a second attack must necessarily be entertained. The other, the case of ramollissement, which was referred to briefly at the last clinic, in which the optic nerves or lobes are implicated, has had a second attack, as was prognosticated. There is now a more perfect loss of motion on one side, with a marked affection of the organs of speech, so that she has great difficulty in articulating intelligibly. From this latter phenomenon some pathologists would refer the fresh sanguineous effusion to the anterior lobes of the cerebrum, to which the encephalic organ of language is referred by the phrenologists. The propriety of this location is not, however, established.

In connection with this subject the lecturer remarked, that not unfrequently he thought an error was committed in having recourse to bleeding too early in cerebral hemorrhage. A shock is given at the time, and he thought it was always better, as in concussion of the brain, to wait until the effects of the shock, the feebleness of circulation, and paleness, have passed away. The objects, with which bloodletting is practised, are either to prevent further effusion where evidences of activity of circulation exist, or to aid in the absorption of the blood that has been already extravasated.

#### EPILEPSY.

The Professor then proceeded to make some observations on epilepsy; and remarked, that as we have organic and functional apoplexy, so may we have organic and functional epilepsy; still, as he had observed in a former lecture, in regard to certain neuroses, the neurine, it is presumable, must always be altered in this affection also; yet inasmuch as there are no appearances on dissection, which can be regarded as pathognomonic, epilepsy has properly been classed amongst the neuroses, according to the definition usually given of the term.

Whatever may be the nature of the modification of the neurine, it gives rise to phenomena that are well marked, as loss of sensation, volition, and mental and moral manifestation. It is distinguished from apoplexy by the absence of stertorous breathing, and by the accompanying convulsions. The paroxysms occur oftener during the night than the day, and this has by some been supposed to be attributable to the greater quantity of blood sent to the brain whilst the body is in the recumbent position; but the lecturer would rather refer it to a peculiar condition of the encephalic neurine, which favours their production.

The periods of recurrence are very variable; sometimes only a few hours intervene; at others days, weeks, or months.

The causes that produce epilepsy may be various. They may be divided into two classes—*centric*, or those operating from within; and *eccentric*, or those operating from without the nervous centres. The latter are of course less serious in their effects or consequences. Most frequently, perhaps, the paroxysm is the result of eccentric impressions, and may very often be attributed to gastro-intestinal irritation, consequent upon taking indigestible food.

The liability to the disease generally diminishes as age advances, being rarely found to occur after thirty-five years of age. Not unfrequently it disappears during the new evolutions that occur at puberty. The French writers generally divide it into three forms, based upon its intensity, as into *grand mal*, *petit mal*, and *absence*; but as they are all of the same pathological character, and depend on the same

causes, the division is scarcely necessary. The attack is frequently preceded by a sense of a vapour or *aura*, which appears to commence at the feet and proceed upwards to the head. This *aura epileptica* is, however, by no means always present.

Sometimes hysterical attacks are mistaken for epilepsy, but in the former there is no loss of consciousness.

Several cases were now brought before the class, as illustrative of the preceding remarks.

*Case first.*—Elizabeth H., æt. 18 years, had been subject to epilepsy, at irregular periods, since she was two weeks old, until last summer, when she experienced an intermission of about three weeks, at which time her catamenia appeared for the first time, and since then they have recurred irregularly. The fits have, however, now become as frequent as ever. This case appears to be hereditary, as her mother was subject to the same affection. The usual remedies, as the different preparations of copper, iron, iodine, &c., have been used without benefit.

*Case second.*—Julia M., æt. 33, unmarried, for the last three years has been subject to fits. The first was induced in her by a severe fright. Not unfrequently—the lecturer remarked—the catamenial discharges are arrested, or rendered very irregular during epilepsy, and, in this instance, the menstruation, which had been regular previously, has been since irregular, although but little inconvenience is experienced from this circumstance.

*Case third.*—Rachael H., aged 33, unmarried, has been subject to the disease ever since her infancy, until within the last two years, when the fits suddenly ceased, since which she has not had one. Has always menstruated regularly, and her general health has been good. The lecturer remarked, that one of the disagreeable results of epilepsy is dementia, or loss of mental power, and such is the case in this woman.

*Case fourth.*—Mary T., aged about 12 years, has had fits ever since she can remember. Her mother was also affected in the same manner. The lecturer has hopes, in this case, that the change which takes place at puberty may arrest the affection.

As in all diseases characterized by paroxysms, little can be accomplished during them except to protect the patient from injuring himself: the great time for action is the interval; yet not much benefit, the Professor thinks, can be derived from antiperiodics. If good is to be expected from any plan, it must be persevered in for a long time.

Antiperiodics are eminently serviceable in diseases which are characterized by paroxysms of regular recurrence; much less so in the same diseases when the intervals are irregular. In epilepsy, the intervals are extremely uncertain, and often very long; so that it is difficult to know how to meet the fits by the ordinary antiperiodics, which are so effective in intermittents. Even where the intermissions are short, the attacks are so irregular as not to be treated with ordinary antiperiodics with success. The lecturer remarked, that epilepsy is a disease in which anti-spasmodics, so-called, would seem to be strongly indicated; yet they are rarely employed: and he believed them to be of very limited efficacy. The “direct anti-spasmodics,” as assafœtida, castor, dracontium, &c., act only, he conceives, by the new impression which they make on the gustatory nerves, and by their exciting influence on those of the stomach. They could, consequently, only be of service when administered a short time before the paroxysm commences, or during it, which is rarely practicable. The disease gene-



rally consists in a pathological state of the organs of innervation, which is best met by remedies that are calculated to give tone to the nervous system, along with attention to diet, taking especial care to avoid any substance that is difficult of digestion. The best tonics are the mineral; and of all remedies which the Professor has employed, he thinks he has derived from nitrate of silver the most benefit. But as the nitrate must undoubtedly become converted into chloride in the stomach, the latter may be given with equal propriety and advantage. Of the nitrate he gives half a gr. three times a day, increasing it by half a gr. a day every fortnight, combined with three or four grains of extract of gentian in the form of pill. Indigo, which was fairly tried in the wards of this Hospital, he conceives to act wholly by the new impression which it makes by quantity on the stomach, when given in very large doses, being in itself inactive; and hence he regards it as no better than so much sawdust. After all, he is disposed to place as much reliance on a strict attention to regimen, and other hygienic measures, as on therapeutical agencies.—Animal food should be preferred to vegetable food, being more easy of digestion. He mentioned, that sometimes an issue, or seton, succeeds apparently in prolonging the intervals; but in the case of Elizabeth H—, it manifestly diminished them, so that the seton had to be withdrawn.

#### HYDROPIA CACHEXIA.

A dropsical patient was now introduced, in whom there was infiltration into the cellular tissue of the inferior extremities, and effusion into the peritoneal cavity, as shown by palpation and percussion.

John C—, born in Philadelphia, aged 44, intemperate, a butcher, entered the ward the last day of January, 1844, with general anasarca, which had existed for three weeks previous to his entrance. He had experienced no treatment; he now complains of pain in the umbilical region and legs. The state of the bowels and urine are in all respects natural; the tongue is furred; the sounds of the heart are natural, but somewhat feeble; the abdomen is swollen, and pits on pressure; there is effusion also into its cavity; the urine yields no albuminous deposit when tested with nitric acid; the liver and spleen are of normal size. Has never had jaundice, but had intermittent fever some years ago.

Most of these effusions, the lecturer stated, are symptomatic of the hydropic diathesis, which is characterized, as in this case, by a peculiar paleness of the skin,—*leucophlegmatia*,—but not unfrequently dropsy is connected with diseases or affections of some of the viscera; hence we have *cardiac*, *hepatic*, *splenic*, and *renal* dropsies. In all these cases, there is a manifest want of balance between the absorbents and exhalants. Dropsies, from this fact, may be classified into *active*, where there is an increase in the action of the exhalants, but no diminution of the absorption; and *passive*, when the action of the absorbents is lessened without any increase of the exhalation: in both cases an accumulation of fluid must necessarily result. Sometimes, the accumulation is owing to transudation of the watery parts of the blood through vessels of loose cohesion, owing to some mechanical obstruction to the circulation, either by infarction or induration of a solid viscus, or to disease about the heart or great vessels, which interferes with the general or special circulation. It is always a matter of importance to inquire into these causes. In the case before the class, the dropsy cannot be referred to infarction or induration of the liver or spleen,

or to disease of the heart; nor is it a case of renal dropsy; for there is no evidence of disease of the kidney—no *albuminuria*. What then is its nature? The lecturer is disposed to refer it to a general loss of balance between the exhalants and the absorbents of the cellular and serous membranes, induced, perhaps, by irregular habits, for he has been intemperate. The case appears to be as much idiopathic dropsy as any that fall under attention. It is a marked case of hydropic cachexia.

The principal indication is to increase the action of the various emunctories, and to produce a revulsive effect; at the same time to watch closely, and perchance some efficient organic cause of the affection may be discovered.

It was recommended, that a cathartic of jalap and bitartrate of potassa, should be given about twice a week; the latter agent being possessed at the same time of diuretic properties. To assist the diuresis, an infusion of juniper berries with the bitartrate was directed to be taken as an ordinary drink when the patient was thirsty. A grain of the mild chloride of mercury, with a grain of squill, was also prescribed night and morning, to be continued so as to touch the mouth slightly. In this way the revulsive effect of the mercury will be secured, together with the diuretic action of the squill. The Professor expressed his hopes, that as there was no manifest visceral disease, under the combined agency of these remedies, with a well regulated diet, the effused fluid would be absorbed, and the patient ultimately recover, provided his stamina be good, and he be careful, by regularity in his habits, not to endanger a recurrence.

#### BIBLIOGRAPHICAL NOTICES.

*Pharmacologia, being an Extended Inquiry into the Operations of Medicinal Bodies, upon which are Founded the Theory and Art of Prescribing.* By J. A. PARIS, M. D., &c. From the Ninth London Edition. With Notes. By CHARLES A. LEE, M. D., A. M., Late Professor (Elect) of Materia Medica and Medical Jurisprudence, in the University of the City of New York; Consulting Physician to the Northern Dispensary of New York; Member of the New York Lyceum of Natural History, &c. &c. &c. Octavo. pp. 353. New York: Harper & Brothers. 1844.

The *Pharmacologia* of Dr. Paris has long been a standard work. It is thirty-two years since it was first published, and it has now reached the ninth edition. In that long period so numerous and important have been the discoveries and improvements in Physiology, Materia Medica, and Chemistry, that the author has found it necessary to rewrite the work in order to accommodate it to the existing state of science. Otherwise it is essentially the same as in former editions, with the exception of the "Second Part," which comprised the *Materia Medica*, which is now omitted. This alteration, (we cannot call it improvement) lessens the size and cost of the book, and in the estimation of most persons, probably, the value too; for this, however, neither the editor nor publishers are responsible. The editor, Dr. Lee, is favourably known in American Medical Literature. The *Notes* which he has appended, without materially increasing the size of the volume, contain some curious and instructive matter, aptly expressed, and consequently enhance its value.



*Anatomical Atlas, Illustrative of the Structure of the Human Body.* By HENRY H. SMITH, M. D., &c. Part Second. Containing Ninety-one Figures.

The present number treats of the "dermoid and muscular systems," and fully sustains the favourable opinion of the work expressed in a former number of the Examiner, on the appearance of the first part. It is creditable to the author and to the artists who have been employed on it.

*Report of the Pennsylvania Hospital for the Insane, for the year 1843.* By THOMAS S. KIRKBRIDE, M. D., Physician to the Institution.

This excellent Institution seems likely to realise the most sanguine hopes entertained by its friends and patrons. The "managers" are gentlemen of intelligence and probity, and the physician, to whose care the patients are consigned, we know to be all that such an one ought to be.

The following extracts exhibit the condition of the Institution, past and present, and the class of patients deemed proper for admission.

Since the date of the last report, we have had the gratification to witness no less than sixty-eight of our fellow beings, who had been afflicted with mental disease,—some from the most distant sections of the Union,—return to their families and to society in the full enjoyment of health; many others with health materially improved, and new means of enjoyment opened to those whose maladies have proved intractable.

During the same period, however, we have had to regret the admission of an unusual number, labouring under severe physical disease, and a few in a state of prostration, that prevented our doing more than endeavouring to soothe their last moments.

At the date of the last report, there were one hundred and eighteen patients in the Hospital, since which one hundred and forty have been admitted, and one hundred and twenty-six have been discharged or died, leaving one hundred and thirty-two under care at the close of the year.

Since the opening of this Hospital, three years since, there has been a steady increase in the number of patients admitted, and the number under care at one time has been constantly augmenting, as will be seen from the following tables, which embrace all the cases that had not been in the Hospital in the city:

1. In 1841, there were admitted	83 patients.
1842, " "	111 "
1843, " "	140 "
2. The average number in 1841, was	104
" " 1842, "	114
" " 1843, "	132
3. The highest number at one time,	
in 1841, was	116
" " 1842, "	127
" " 1843, "	145
4. The total number under care,	
in 1841, was	176
" " 1842, "	238
" " 1843, "	258
Of those discharged during the year 1843, were—	
Cured	68
Much Improved	7
Improved	14
Stationary	20
Died	17
Total,	126

Of the patients discharged "Cured," thirty-four were residents of the Hospital, not exceeding three months; twenty-three, between three and six months; eight, between six months and one year; and three, for a longer period than one year.

Of those discharged "Much Improved," three were under treatment not exceeding three months; two, between three and six months; and two between six months and one year.

Of the "Improved," five were under care less than three months; three, between three and six months; three, between six months and one year; and three for a longer period than one year.

Of those discharged "Stationary," five were in the house less than three months; five, between three and six months; three, between six months and one year; and seven over one year.

Among those discharged without being well, were several patients whose removal was premature, and in whose cases, a proper trial of treatment would probably have resulted in recoveries. Of these, four are registered "Much Improved," three "Improved," and four "Stationary." A few we have learned continued to convalesce, and ultimately became quite well. They have been reported as they were when they left the Hospital.

Ten males and seven females have died during the year. Of these, three were cases of apoplexy (two being third attacks), three were cases of dysentery, of a violent form, with which several of our debilitated patients were attacked during the past summer; two died from abscess of the kidneys; one from chronic bronchitis; one, cancer of the intestines; one, ulceration of the intestines of long standing; one, erysipelas, with effusion in the thorax; one, gradual wasting of the powers of life; one, sudden death, in a case of enlargement of the heart, with ossification of the aorta; two were cases of inflammation of the brain, dying on the fourth day after admission; and one patient who had been under high excitement for some time, fell into a state of collapse, and died a few hours after reaching the Hospital.

From the above abstract it will be observed, that more than one-half of the deaths have resulted from chronic diseases of a dangerous character, most of which existed before the patients entered the Hospital and between which and their insanity there was, in several instances, a direct connexion. This was particularly so with the cases of apoplexy and abscess of the kidneys. The case of cancer of the intestines was one of those latent forms of disease, occasionally observed among the insane, going on steadily to near their fatal termination, often without a complaint from the patient, and with hardly a symptom likely to lead to a correct diagnosis.

The cases of inflammation of the brain, it is scarcely necessary to say, should never have been brought to the Hospital. This disease, under the most favourable circumstances of rest and quiet, is of a highly dangerous character; but when a patient is subjected to the exposure and excitement, attendant upon a rough journey, the result can hardly prove different from that which occurred in the cases which reached us.

It is very desirable that the insane should always be promptly placed under treatment—the favourable termination of the disease and its duration being often dependant upon such a course; but it is of the utmost importance that a patient should never be sent from home till the character of his illness is



positively made out, nor till there is an absolute certainty that the individual is not labouring under the delirium of phrenitis, or some low form of fever.

With the exception of several cases of dysentery last summer, already referred to, our patients have had a remarkable exemption from all acute disease, since the opening of the Hospital.

All classes of insane persons, without regard to the duration of the disease or of its curability, are admitted into this Institution. Idiots, however, are not received; and for the epileptic, a special agreement should be made.

Cases of Mania à Potû, are not received into this Hospital—but into that in the city, *exclusively*.

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*Lehrbuch der Allgemeinen Anatomie des Menschen.*

Nach eigenen Untersuchungen zum Gebrauche bei Vorlesungen, sowie zum Selbststudium fuer praktische Aerzte und Wundaerzte: bearbeitet von VICTOR BRUNS, Doctor der Medicin und Chirurgie, Professor an dem Collegium Anatomico-Chirurgicum zu Braunschweig, praktischem Arzte und Wundaerzte. 8vo. S. 498. Braunschweig: 1841.

*Manual of the General Anatomy of Man, &c. &c.* By VICTOR BRUNS, &c. &c. 8vo. pp. 398. Brunswick: 1841.

The recent histological researches with the microscope and the valuable information emanating from them have led the author to the publication of this work. Dr. Bruns is himself an experienced microscopist, and well known to the general anatomist for the interesting investigations and suggestions made by him on many topics. His work is better arranged and more complete, although somewhat smaller in size, than that of Mandl, recently published. After an introduction on the objects and literature of anatomy and its relations to congenerous sciences, he describes, first, the constituents of the human body; and secondly, the organic systems in general. These he divides into general systems, and special systems, under the former comprising the cellular system; the vascular system, and the nervous system; and under the latter the corneous, the cartilaginous, the osseous, the dental, the fibrous, the muscular, the serous, the cutaneous, and the glandular systems.

The work contains a great amount of information; and, we think, is better worthy of an English version than any of the publications on general anatomy that have recently appeared from the German or French presses. The *Allgemeine Anatomie* of Henle is much more full; but this would be a serious objection to it with the book craft; and it is probable, that if an English translation were published, it would have but a slender sale. The work of M. Bruns is more condensed, and we should like to see it translated on this side of the Atlantic, with the additions, by some competent individual, of what has transpired since it was published in Germany.

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Charles A. Lee, M. D., of this city, has been appointed Professor of Materia Medica and General Pathology in Geneva Medical College, in place of Professor John Delamater, resigned.—*N. Y. Journal of Medicine, &c.*

## THE MEDICAL EXAMINER.

PHILADELPHIA, MARCH 9, 1844.

### BOND'S PLACENTAL FORCEPS.

At the last meeting of the Philadelphia College of Physicians—after giving some account of the mechanical means heretofore proposed, or now in use, for the removal of the placenta, in those cases of abortion where it is retained and attended with obstinate hæmorrhage—Dr. Bond laid before the College a *placental forceps*, which he had recently contrived.

The instrument is about ten inches long, curved laterally on a radius of about twelve inches. The blades are about an inch and a half longer than the handles, and terminate in an oval expansion half an inch wide. The handles and blades, including the edges of the oval expansion, are rounded or beveled off, very much like those of his œsophagus forceps, so as to preclude all probability of wounding or pinching any of the soft parts. The inner part of the oval expansion is made hollow and rough, so as to maintain a secure grip upon the body embraced. These precise dimensions, as to length and curvature, are not essential, but will probably be found as convenient as any.

The Professors of Obstetrics in the University of Pennsylvania and in Jefferson Medical College have exhibited the instrument to their respective classes, with very decided commendations.

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### MEDICAL SCHOOLS.

The following pleasant remarks on the multiplication of Medical Colleges in the Valley of the Mississippi are from the last number of the *Western Journal of Medicine and Surgery*. As they are not very inapplicable to the "Atlantic Strip," also, we have concluded to transfer them to the Examiner, for the amusement, and perchance instruction, of its readers. We have always been the advocate of perfect freedom of competition in the trades and occupations of human society, and therefore make no complaints against those who act upon that principle in the business of giving medical instruction. But to *give instruction* and to *confer degrees*, are very different things, and it is time that the distinction was broadly made. There is no necessary connexion between them, and the public interest and the honor of the profession would be greatly promoted on their separation. As matters now are, there is too much reason to believe that the *diploma*, instead of being awarded as the premium of merit, is too frequently proffered as the price of patronage on the one part, and sought for as the veil for ignorance and imposture on the other; hence it is, that so much hot haste is seen in getting up medical Colleges all over the country; not by the communities for whose benefit they are presumed to be established, but at the instance and for the particular purposes of individuals whose pretensions have been overlooked, or possibly not discovered, by existing institutions. Such, however, appears to be the spirit of the age in which we live, and the genius of our political institutions, that little is to be hoped for in the way of governmental restraint. Whether the moral feeling of the pro-



fession can accomplish any reform in this respect, is more than doubtful, under the circumstances in which we are placed.

The Mississippi Valley is remarkable for many things, but will soon be as much so for its medical colleges as for aught else. These multiply astonishingly. They grow as rapidly as Jonah's gourd. One lies down at night to rest from a hard day's toil, and after a deep sleep, such as fell upon Adam, he wakes, and lo! by his side is a medical college, "complete from turret to foundation-stone." They come not singly merely, but by twos and threes—in populous cities, and amid "populous solitudes of bees and birds" as well. Not quicker or more sudden did Roderic Dhu's archers, at blast of bugle-horn, start up from rock and tree, than do these institutions appear at trumpet or even penny-whistle call of some aspiring grandson of Apollo. With one flourish of the serpent-bound staff of him who worshipped

In Argolis, beside the echoing sea,  
they come, thick-clustering over the land,  
As when the potent rod  
Of Amram's son, in Egypt's evil day,  
Wav'd round the coast, up-call'd a pitchy cloud  
Of locusts.

We have now a complete chain of them, enough to make a veritable *cordon sanitaire*. Disease is hemmed in—is "cabined, cribbed, confined"—and can have neither egress nor ingress without challenge from trusty sentinel. Tracing them on the map, they make a figure resembling an ill-shaped battledore. Beginning with that at New Orleans, where, as stated in another paragraph, a new college building is just completed, we go to St. Louis and find two more; next to Jacksonville, where there is a fourth; then to Chicago, and count a fifth; turning thence down the lake shore, we find a sixth at Laporte; proceeding to the southern shore of Lake Erie, Cleveland gives us a seventh, and Willoughby, eighteen miles distant, an eighth; crossing the country and following the Ohio, Cincinnati gives the ninth; a *detour* to Lexington, and we have a tenth; Louisville makes the eleventh; another *detour* to Nashville completes the dozen; and if we count one that is in a formative stage at Madison, Indiana, we have a clean baker's dozen. Seven States containing 13 medical colleges, some of which are almost within call of each other!

#### MEDICAL INSTITUTE OF LOUISVILLE, (Ky.)

The Western Journal announces that "Dr. Cook, the venerable Professor of Theory and Practice," has signified to the board of managers his determination to retire from the School at the close of the present session; and that the board contemplate reducing the number of Chairs to seven. We learn, from other sources, that Prof. Drake is to be transferred to the Chair now occupied by Dr. Cook, and that the one now held by him is to be abolished.

The New York Journal of Medicine, boasting of the resources of that city, says,—“Its anatomical opportunities are so vast that it furnishes supplies to the Medical Schools from Maine to New Orleans.” Whether this vast supply of the "*materiel*" is owing to the insalubrity of the place, or the want of skilful physicians, is not stated.

## RECORD OF MEDICAL SCIENCE.

### MR. PAGET'S REPORT CONTINUED.

#### CIRCULATION.

Dr. Marshall Hall, in a paper on the 'Circulation in the Acardiac Fœtus,' has given proof that the pulsatory movement of the blood may, under certain circumstances, be communicated to the blood in a second set of capillaries. He placed the pectoral fin of an eel in the field of a microscope, and compressed it by the weight of a heavy probe. The movements of the blood in the capillaries became obviously pulsatory, their pulsations being synchronous with the contractions of the ventricle. He adduces this fact in support of the probability that the circulation in the acardiac fœtus is maintained by the force of the heart in the perfect twin fœtus, by which the blood is driven through the capillaries of the placenta into the umbilical vein of the acardiac fœtus, and thence through its venous capillaries into the aorta, and along the umbilical arteries to the placenta again. And the fact is equally important as an additional evidence of the general propagation of the force of the heart through one or even two sets of capillary vessels.

M. Poiseuille's observation of the influence of cold on the capillary circulation is mentioned in the last Report, (p. 44.) He has further shown that the influence of some other agents is similar in organic and in inorganic capillary tubes. By adding successively acetate of ammonia, nitrate of potash, and alcohol to the blood, he found that the first two accelerated, and the last retarded its flow. They produced the same effects when added to serum which was made to pass through inorganic capillary tubes; as, indeed, might be expected, seeing that in both cases the bulk of the fluid moves, not upon the walls of the tube, but upon the layer of fluid which adheres and remains at rest upon the walls. Applying these results to determine the rate at which blood passes from one jugular vein to the other through the lungs, heart, &c., he found that the passage was made, in horses, in from eighteen to twenty-four seconds, when acetate of ammonia or nitrate of potash was added to the blood, but in from forty to forty-five seconds when alcohol was added.

According to Mr. T. Wharton Jones, the congestion which succeeds to the temporary acceleration of the capillary circulation in an inflamed part, is due to the red-blood corpuscles adhering together (in the manner already described,) and to the walls of the vessels till stagnation occurs; and he has shown that the same arrest of the blood takes place when capillaries are touched with a solution of salt, or when a stream of carbonic acid is directed against those of the frog's lung. From these last facts he suggests with much probability that the stoppage of the circulation in the capillaries when certain salts are added to the blood, and that which takes place in asphyxia, depend on a similar adhesion of the corpuscles. With regard to asphyxia, his observations agree in their tendency with those of Dr. John Reid on the stagnation of the blood, independent of any adherent mechanical hindrance, when nitrogen is inhaled; and the action of carbonic acid in making the corpuscles cohere and assume the most favorable condition for the formation of a buffy coat, gives additional probability to the observations already quoted from Dr. Polli.

#### RESPIRATION.

*Respiratory Movements.* MM. Beau and Maissiat,



have published some investigations in the physiology of respiration. Revising the forgotten opinions of Haller and Boerhaave, they have pointed out the very different characters of the respiratory movements in men, women, and children. They distinguish three types of these movements. 1. The *abdominal*; in which the visible movements are entirely in the abdominal walls, and especially in their anterior part, the ribs being unmoved, except when the body rests on the side. 2. The *inferior costal*; in which the movement takes place chiefly in the lower ribs, from the seventh inclusive downwards; those above the seventh moving very little, and the less, the higher they stand; and the lower end of the sternum ascending, though in a less degree than the ribs expand. 3. The *superior costal*; in which the movement is effected chiefly in the upper ribs, (especially the first,) which are carried upwards and outwards, and carry with them the clavicles and sternum.

In infants, and often to the third year of life, the respiration is of the abdominal type in both sexes. After the third year, the superior costal type is generally observed in girls, and the inferior costal in boys, and after puberty, the difference becomes more striking. Nearly all women breathe with the upper half of the chest, and nearly all men with the lower half and the abdomen. The mode of respiration in women has no connexion with their wearing of stays, but is probably adapted to the little capacity for breathing with the lower part of the chest during pregnancy. The difference is maintained, in general, even in dyspnoea; only, when it is extreme, a person whose natural respiration is according to any one of these types, may exhibit combinations of the movements proper to the others.

The quiet respiration of the rabbit and the cat is abdominal; their excited respiration is abdominal and inferior costal; that of the dog is always inferior costal; that of the horse is abdominal, except in sighing or when *blown*, when it becomes inferior costal, like that of man. These animals were used in experiments in which many of the actions of the respiratory muscles were observed.

On the anatomy of the osseous parts of the respiratory organs, the authors point out that the intercostal spaces are always proportionately widest between those ribs which are most moved in respiration; the superior are the wider in women, the inferior in men. In men, too, there is a remarkable distance between the sixth and seventh ribs, and the seventh and three following it often form a great projection. The articulations of the last two ribs with the spine are very lax, and their anterior ends being free, they follow the movements of the abdominal walls in which they are imbedded; they commonly descend in abdominal inspiration, and ascend in the inferior costal movement. The first rib is peculiarly moveable in women, and those who breathe like them; nearly, or quite immoveable in men and animals which breathe habitually with the lower ribs and abdomen. And herein is the solution of the question of the mobility or immobility of the first rib, as well as of that respecting the relative degrees of freedom of motion in the other ribs; they vary according to the peculiar type of the respiratory movements.

The shortness and early ossification and ankylosis of the first costal cartilage, make the sternum participate much more in the movements of the upper ribs than it does in those of the lower ones; hence, the antero-posterior enlargement of the chest in inspiration is much greater in women than in men. The increase of the intercostal spaces in inspiration is directly proportionate to their natural width; greatest,

therefore, above in women, and below in men. In both, the increase is far greater anteriorly than it is posteriorly. In forcible expiration, the width of the intercostal spaces may be reduced to considerably less than it is in ordinary expiration.

MM. Beau and Maissiat investigated also at great length the actions of the respiratory muscles, both by feeling and looking at them while in action, and by vivisections of dogs. Their conclusions, so far as the muscles are concerned in respiration, are briefly as follows, and many of them may be confirmed by observation on one's own person. *Intercostals*: In inspiration, they are elongated, and become hard and concave on their outer surface; in quiet expiration, they are moderately shortened, and become less hard and flat; in complex and forcible expiration, they become prominent and very short and hard. They are therefore muscles for forcible expiration, like their analogues, the oblique muscles of the abdomen; their hardness in inspiration is due to their being stretched; but their contraction (except by their elasticity) is only seen in forced expirations or in efforts.

[For many reasons, this conclusion must be considered very doubtful. The experiment on which the authors chiefly found their belief that the intercostals cannot raise the ribs, consisted in cutting through the pectoral muscles and the whole length of the intercostals between the sixth and seventh ribs on both sides: after this was done the lower ribs were still raised in inspiration (as they suppose) by the diaphragm. Perhaps no conclusion ought to be drawn from the results of such mutilation; but M. Debrun (Gazette Médicale, Jan. 3, 1843,) having repeated the experiment, with the addition of cutting the diaphragm from the ribs, and having found that the ribs were still raised in inspiration, maintains that the five lower ribs are thus raised by their intercostal muscles, and that the sixth, from which the intercostals above were cut away, is *pushed* up by the fifth. The following arguments appear to me conclusive in favour of the usually inspiratory action of the intercostals. 1. When the spinal cord is injured below the origins of the phrenic nerves and above those of the intercostal nerves, the ribs are very nearly motionless in respiration, for the intercostal muscles are paralysed though the diaphragm is active. 2. The upper ribs are chiefly moved in the superior costal respiration, though the diaphragm cannot act upon them. 3. The levatores costarum, which can act in inspiration alone, have an arrangement exactly analogous to that of the external intercostal muscles. 4. Whenever the intercostal muscles are affected by diseases in which the pain is increased by muscular contraction, there is an increase of pain in inspiration.] The authors believe also (and with more probability, for whatever be their ordinary action, the intercostals may, in extraordinary circumstances, act in either direction,) that in forcible expiration they serve to make the whole walls of the chest rigid and resisting, so that they may not be distended by the eccentric impulse of the lungs, which are compressed on every side, and especially by the diaphragm. *Levatores costarum*: supposed (but improbably) to be not concerned in respiration, but to serve for maintaining the spine erect. *Infra costales*: probably muscles for forcible expiration, like the internal intercostals. (?) *Triangularis sterni*: a muscle of expiration, by drawing together the sternum and the costal cartilages. *Scaleni*: muscles of inspiration, especially in the superior costal type of movements, but chiefly flexors of the head. *Sternomastoid*: auxiliary to the scaleni in forcible inspiration. *Trapezius*: its upper border assists in forcible inspiration, its lower border in for-



cible expiration. *Levator anguli scapulae*: acts with the upper part of the trapezius in violent inspiration. *Subclavius*: depressor of the clavicle after forcible inspiration. (?) *Latissimus dorsi*: its lower border acts in forcible expiration, as one may find by feeling the posterior wall of the axilla while coughing; at the same time it makes rigid those parts of the walls of the chest and abdomen on which it lies, and it presses in the lower ribs. *Serratus magnus*: acts in forcible inspiration, but chiefly (as was shown in a patient in whom it alone was paralysed,) it serves, by co-operating with the deltoid in raising the arm. *Serratus posticus superior*: not a respiratory muscle, (?) but an extensor of the neck. *Serratus posticus inferior*: expiratory. *Pectoralis major*: its lower quarter is a muscle of inspiration, its upper three-fourths form one of expiration, but it does not act except in dyspnoea. *Pectoralis minor*: its lower half acts habitually (?) as a muscle of inspiration.

As to the action of the diaphragm, the authors believe that it produces, 1. Elongation of the thoracic cavity, especially in the abdominal type of respiration. 2. Increase of the transverse diameter, by elevating and turning outwards the lower ribs, as in the experiment quoted in a preceding note; and this especially in the inferior costal respiration. 3. Occasionally, in infants, the depression of the costal cartilages. The second of these actions of the diaphragm is also described by M. Magendie. The true mode of action is probably this: when the muscular fibres of the diaphragm contract, its central portion descends, and at the same time traction is exercised on the ribs at the peripheral ends of the fibres; and when the resistance to the descent of the diaphragm is greater than the resistance to an upward motion of the ribs, these are raised by the fibres which are attached to them, and whose direction, even in moderate inspiration, is nearly vertical. And this drawing upwards of the ribs is necessarily converted into a movement upwards and outwards by the limited and peculiar mobility of their attachments to the vertebrae and sternum. The third assigned action, that of the occasional depression of the inferior costal cartilages in children, is more reasonably ascribed by Mr. Alexander Shaw to this, the most pliant part of the walls of the chest, being pressed in by the atmosphere when the other parts of the chest are expanded to a size which the lungs cannot attain, on account either of disease of their structure, or of obstruction to the free entrance of air through the larynx and trachea.

*Structure of the Lungs.* Mr. Addison has given an account of the anatomy of the minute air-passages which, while it confirms nearly all that Reisseissen observed, is more complete, and very probably true. In the foetus the ultimate bronchial subdivisions are tubular; they have a regularly branched arrangement, ramifying symmetrically in all directions, and terminating without anastomoses in closed extremities which are generally situated at the boundaries of the lobules. But when an animal has respired, the entrance of the air into the lungs distends the lobules, and the ultimate bronchial subdivisions undergo a great change. The membrane composing each of them offers only a feeble resistance to the pressure of the air, and is pushed forwards and distended laterally into rounded inflations, forming a series of communicating cells, which meeting on all sides those of the adjoining bronchial subdivisions, are moulded by the mutual pressure into various hexagonal and pentagonal forms. These distended passages (something like large beaded tubes) Mr. Addison calls *lobular passages*; and a section of them shows the *oval foramina* leading from cell to cell,

which are so conspicuous in a thin layer of inflated and dried lung. The *air cells*, according to this account, are the inflated parts of the *intralobular* bronchial subdivisions; and those of each lobule form a distinct system, having no communication with those of the adjacent lobules, except in the common trunk from which the intralobular bronchi of each system are derived. The air-cells are from 1-200 to 1-500 of an inch in diameter; and the oval foramina are from 1-60 to 1-150 of an inch or less in diameter. The blood-vessels lie upon each *lobular passage*, and between each two of them.

*Capacity of breathing.* M. Bourguery's examinations of the structure of the lungs are detailed in vol. XIV, p. 546. They may easily be reconciled with the more probable account of Mr. Addison, from which they chiefly differ in that the minutest branches of the bronchi are described in them as freely anastomosing, so as to form a series of labyrinthic canals; and that the constrictions of the tubes by which they are formed into cells or loculi are said to be due to annular vessels surrounding them. M. Bourguery has more recently examined the relations of the varying structure of the lungs in different ages and sexes to their functional capacity. The subjects examined were fifty males and twenty females, and the deductions are as follows: 1. The measure of respiration (that is, I think, the proportion between the quantity of air which can be taken in by a forced inspiration, and the quantity which the lungs just previously contained) is always the greater the more youthful and lean the person is: strength and health do not in this regard compensate for youth. 2. The measure in males is twice as great as in females of the same age. 3. The function is at its highest point in both sexes at thirty years of age—the age which corresponds with the completest developement of the aërial capillary plexus, or finest branches of the bronchi. At this age a forced inspiration increases the air in the chest from 2.5 to 4.3 litres in males, and from 1.1 to 2.2 in females. The boy of fifteen inspires two litres, the man of eighty, 1.35. 3. The volume of air necessary for an *ordinary* inspiration increases with advancing age; and this increase exactly represents the diminution of the energy of the pulmonary hematosis. 4. The capacity of the lungs for forcible inspiration increases from infancy to the age of thirty, doubling itself in twenty-three years. After thirty it diminishes one fifth in the first twenty years; one fifth more in the next ten; and nearly one half in the next twenty; and this gradual decrease of capacity for forcible inspiration is true of all persons, although one may have a greater general capacity of respiration than another of the same age. Hence the young person possesses a great capacity of respiration, as it were, in reserve; the old man has little, and is therefore unfit for great exertion.

*Exhalation of carbonic acid.* MM. Andral and Gavarret state the following as the results of experiments made in sixty-two persons (thirty-six males and twenty-six females,) to determine the quantity of carbonic acid exhaled in breathing: 1. At all ages beyond eight years the exhalation is greater in males than in females. 2. In males it regularly increases in quantity from eight to thirty years of age; from thirty to forty it is stationary or diminishes a little; from forty to fifty the diminution is greater; and from fifty to extreme age it goes on diminishing till it scarcely exceeds the quantity at ten years. 3. The quantity of carbon exhaled in the form of carbonic acid in one hour by males of different ages is as follows;—at eight years, 77.5 grains; at fifteen, 135 grains; at twenty, 176.7 grains; between thirty and



forty, 189 grains; between forty and sixty 156 grains; between sixty and eighty, 142.5 grains; and in a man 102 it was only 91.5 grains. 4. In females the same proportionate increase goes on to the time of puberty when the quantity abruptly ceases to increase, and remains stationary so long as they continue to menstruate. When, however, menstruation has ceased, the exhalation of carbonic acid begins again to augment; and, then again, in advancing years, decreases as it does in men. Thus before puberty the quantity of carbon exhaled by girls in an hour is ninety-nine grains; and so it continues while the habit of menstruation continues; afterwards, from thirty-eight to forty-nine years of age, it increases to 130 grains; from fifty to sixty again falls to 113 grains; from sixty to eighty is reduced to 105 grains; and in a woman of eighty-two, was only ninety-three grains. 5. In amenorrhea the exhalation is always increased. 6. In pregnancy the exhalation is equal to that which is natural soon after the cessation of menstruation. 6. *Ceteris paribus*, the more robust a person is the more carbonic acid is exhaled; but the differences are not great. 7. The maximum of exhalation was in a strong man of twenty-six, who in an hour exhaled carbonic acid containing 218.5 grains of carbon; the proportionate minimum in a weak man of forty-five, who exhaled in the same time only 139.5 grains; 8. The influences of the weights of persons, of the capacities of their chests, and of the extent of the respiratory movements, are not great.

#### ANTAGONISM OF TYPHOID AND INTERMITTENT FEVERS.

At the séance of the Académie de Médecine, on 21st November, a letter was read from M. Boudin, chief physician to the Military Hospital at Versailles, of which we extract the following summary from the "Gazette Médicale" of Nov. 25:

There is going on at this moment, under the very walls of Paris, a pathological phenomenon, which sheds no small light on one of the most important and deeply-agitated medical questions of the present day.

There are, by chance, at Courbevoie, one league from Paris, in the same barrack, two infantry regiments, which, since their *reunion*, have perpetually presented the most opposite pathological diathesis.

Thus, one of these regiments, the 23d, affords plenty of cases of typhoid fever, and scarcely any of intermittent; whilst the other, the 69th, has for the last seven months kept the hospital at Versailles full of intermittent cases, but has only presented two cases of typhoid fever.

Since the *existing* hygienic conditions of both regiments are the same, it is evident that some *anterior* causes must be sought for, in order to account for this striking diversity of their pathological diathesis.

Now the 23d has long been stationed at Courbevoie, and therefore exhibits in its pathological manifestations the influences of that place alone. The 69th, on the contrary, has been only seven months at Courbevoie, but for the two previous years was in garrison at Strasbourg; and this latter regiment has evidently brought with it, and is now clearly showing, the influences of that marshy district.

This latter regiment, which was embodied at Strasbourg in 1840, yielded in the first year 73 cases of typhoid fever. After a year's residence in the marshy atmosphere of that place, the number of cases of typhoid fever sank (in 1842) to 32, less than one-half, whilst the number of intermittent fevers increased

considerably. After the end of the second year, and in spite of the departure of the regiment from Courbevoie, the intermittent cases increased, so that during the first *three* months of 1843 they amounted nearly to 200, whilst, on the other hand, the number of typhoid cases fell to 2 in *seven* months.

These observations, continues M. Boudin, are not without ample precedent; for he used constantly to observe that when regiments arrived at Marseilles from the marshy localities of Corsica, the Morea, and Algiers, they remained untouched by typhoid fever, although it decimated the resident garrison of the place.

The long existing influence of a marshy soil is shown by the fact that it was by no means rare to find men affected three months after their removal from it to another.

But other diseases also, besides those arising from marsh miasmata, may exhibit themselves long after the patient has been removed from the district. Thus, regiments which proceed to Algiers from Marseilles, yield many cases of typhoid fever for months after their arrival, although that disease would be sought in vain amongst any other of the civil or military residents of the place.—*Ibid.*

#### DR. GUY ON THE INFLUENCE OF EMPLOYMENTS UPON HEALTH.

We gave, in our Number for November 18, a condensed account of the conclusions deducible from a former paper by Dr. Guy. He has since contributed another paper to the Journal of the Statistical Society, from which we take the following abstract:—

"A comparison of in-door with out-door occupations leads to the following results:—

"1. the ratio of cases of pulmonary consumption to those of other diseases is somewhat higher in persons following in-door occupations, than in those working in the open air; and this rule applies to both sexes.

"2. Pulmonary consumption occurs at an earlier age in men following in-door occupations than in those following out-door occupations.

"3. The probable excess of cases of pulmonary consumption in men following in-door occupations (for a higher ratio of consumptive cases in these employments is merely a strong presumption in favor of such excess), and the earlier age at which consumption makes its attack, would naturally tend to fill this class of employments with a greater number of young men, as well as to occasion a higher mortality at the early periods of life, and a lower average age of death. Accordingly, among those employed within doors, there is an excess of young persons, a higher mortality in early life, and a lower average age of death. The greatest age, as it happens, is the in the two classes.

"The classification of in-door employments, according to the amount of exertion which they require, leads to the following results:—

"1. The ratio of cases of pulmonary consumption to those of all other diseases is highest where the amount of exertion is least, and lowest where it is greatest; and the intermediate degree of exertion presents an intermediate ratio.

"2. The age at which pulmonary consumption makes its attack is earlier in employments requiring little exertion, than in those requiring more exertion, and in those requiring moderate exertion than in those demanding great effort.

"3. The per centage proportions of men under forty years of age following these three classes of em-



ployments is in strict accordance with the ratio of consumptive cases, and the ages at which consumption makes its attack; those proportions following the exact order of the degree of exertion.

"4. The age at death also follows the same order, the per centage proportion of deaths under forty being highest where there is least exertion, lowest where the exertion is greatest, and intermediate where there is a medium degree of exertion.

"5. The average age of death, also, is lowest where there is least exertion, but highest where the exertion is intermediate between the two extremes. The somewhat lower average obtained in the case of employments requiring great exertion, appears to depend on an excessive mortality under twenty years of age. The greatest age also occurs in occupations requiring a medium degree of exertion, the least maximum in those demanding the greatest effort.

"6. In the class of in-door occupations, with varied exercise (a class including the footman, waiter, &c.), the ratio of cases of pulmonary consumption ranks next to that of the sedentary occupations, and the per centage proportion of consumptive cases occurring before forty, the per centage proportion of men so employed under that age, and the per centage proportion of deaths are higher than in any of the other classes, while the average age of death is lower. This class, however, stands alone, inasmuch as young men are in comparatively greater request, and old men comparatively little wanted.

"7. The class of out-door occupations requiring moderate exertion, presents a higher per centage proportion of deaths under forty, and a corresponding excess of young men; but the ratio of consumptive cases, and the per centage proportion of such cases occurring under forty are lower than in the class requiring greater exertion. This apparent anomaly may probably be explained by the fact that the attack of consumption is postponed till a later age in men following out-door employments, than in those working within doors.

"8. The maximum age in the case of men following the more laborious out-door employments is lower by one year than in those using less exertion, and in the latter there is a considerable excess of aged men.

"9. Sedentary employments, and those requiring little exertion, are more unfavorable to adult and middle age, but more favorable to old age, than those requiring greater efforts; on the other hand, employments requiring greater exertion are unfavorable to youth and longevity, but favorable to middle age. Employments requiring little exertion prove fatal, by inducing an excess of cases of pulmonary consumption early in life; those requiring great exertion, by occasioning other diseases of the air-passages and lungs, towards the commencement of old age.

"The following observations apply to certain occupations examined separately in the former essay, and to the effects of intemperance:—

"1. The exposure to a high temperature does not appear to exercise any injurious influence upon health during the early periods of life; but, in common with employments requiring a great amount of exertion, it is unfavorable to longevity.

"2. The inhalation of dust does not appear to be attended with the extremely injurious consequences which the high ratio of cases of pulmonary consumption would lead us to expect; but, when compared with the aggregate of other out-door occupations, the employment of the mason is found to be in some degree less favorable to health and longevity.

"3. Habits of intemperance appear to exercise a most injurious influence upon health; for men pecu-

liarily exposed to the temptation of drinking present a high ratio of cases of consumption, a high per centage proportion of such cases occurring under forty, an excess of young men, an excess of deaths under forty, and especially between thirty and forty years of age, and a low average and maximum age.

"Lastly. A comparison of the age at death of gentlemen (including professional men), tradesmen, and artizans, issues in displaying the great advantage which the first class possesses over the other two, and the comparatively small difference which exists between the tradesman and the artizan. The average age of death of the first class exceeds that of the other two by ten years, while the average age of the tradesman exceeds that of the artizan only by a small portion of a year.

"The present inquiry, then, confirms the results to which other observers have arrived, by showing the great and undue advantage which the higher classes enjoy over other members of society. They live longer, and may be fairly presumed, while they live, to enjoy better health. This advantage is not to be wondered at, considering the better supply of air and food which they receive, the more spacious houses which they live in, and the greater care bestowed on the places which they inhabit. It is also partly due to the facilities which they enjoy for exercise in the open air. The great difference which exists between the gentry and other members of society, however, is not more worthy of notice than the very slight advantage which the tradesman enjoys over the class of working men. If we limit the comparison to the average age, we find that the tradesman lives about three-quarters of a year longer than the entire class of working men, little more than a year and a half longer than the class employed solely within doors, two years longer than men following the more sedentary occupations, and about three years longer than the class which consists chiefly of domestic servants. On the other hand, the life of the tradesman is shorter by about a quarter of a year than that of the entire class of out-door laborers.

"The little advantage possessed by the tradesman over the mass of working men probably results from the sedentary life he leads, his want of proper exercise, and the small space which the necessities of business allow him to give to the accommodation of himself and family. Taking one tradesman with another, it is, perhaps, not unreasonable to suppose that he habitually breathes an air as impure, and follows an occupation nearly as unwholesome, as the class beneath him. The labour which the working man has to undergo, provided it is not carried to excess, is more favorable to health than the confinement to which the tradesman is subject, and this confinement raises him in the scale of mortality but little above men following the more sedentary occupations. Both classes of men—the tradesman and the working man—are doubtless exposed to unwholesome influences, which might be wholly removed or greatly mitigated by the interference of others, or by their own precautions. Both classes probably suffer to a greater degree than they imagine from those habits of intemperance from which the higher classes have nearly emancipated themselves, but which still form the great physical and moral bane of the mass of our population.

"The bad effects of sedentary habits, on the one hand, and of laborious exertion on the other, have been fully demonstrated in the course of this and the former essay. How much of the waste of life and health is due to the bad air which the in-door laborer is constrained to breathe; how much to the incle-



mencies of the weather to which the out-door laborer is exposed; how much to the unhealthy habitations which both classes are compelled to live in; and how much to the bad habits in which both indulge, it is impossible to determine. These causes are so mixed up together as not to admit of that separation which must precede a correct estimate of their comparative influence. But that unwholesome dwellings, and bad air, and intemperate habits do tend to injure health and shorten life, there is abundant proof; that the permission of such things, where it is possible to rectify or prevent them, is bad economy, there can be no doubt. Unfortunately for the sufferers by these unwholesome influences, it is much more easy to establish general principles concerning them than to point out the precise amount of injury which they occasion. How many thousand unnecessary victims pulmonary consumption claims year by year it is impossible to ascertain; whether this chronic plague is more or less destructive than the kindred pestilence which is constantly snatching away so many of our adult population must remain a subject of conjecture; but of this there can be no reasonable doubt, that in addition to those who might have escaped consumption, and reached at least the borders of old age, a large proportion of all who die of that disease die much earlier than they would if they had been placed in more favorable circumstances. As each unnecessary death from consumption represents the loss, after a slow and lingering illness, of one of those who form the real strength of society, so the death of each father of a family at an age when those who depend upon him for support are most helpless, is the source of an amount of private suffering and privation, and oftentimes of expense to the public, which is much more easily conceived than estimated. To complete the calculation of the cost to society in this one disease alone, which results from unwholesome influences admitting of removal, it would be necessary to add the hereditary taint transmitted from the consumptive parent, and ready at a fitting season to cut short the life of a child after he in his turn has bequeathed the same sad legacy to his offspring. Thus it happens that the seeds of disease are more thickly sown with each new generation, and death reaps an earlier and more abundant harvest, and a race of men famed for strength and vigor is doomed to slow but sure degeneracy."

*Prov. Med. and Surg. Journ.* Dec. 16, 1843.

#### TREATMENT OF MALIGNANT DISEASE.

The general rules for the treatment of malignant disease are these:—If the case is decided, any palpable disorder in the health should first be removed, by alteratives and tonics, and then the disease be extirpated as soon as possible, provided it can be done with safety. If the case is doubtful, an alterative plan of treatment must be pursued, which will cure the disease if it be not really malignant,—retard its progress if it be. Again, if the case is decidedly malignant, but extirpation is deemed impossible or unjustifiable, the rule is the same: the health must be improved and the disease as far as possible retarded. —*Mr. Druitt.*

#### NITRIC ACID FOR PILES.

We must mention the use of nitric acid, which has been recommended by Dr. Houston in order to destroy the tender, tumid, and bleeding surface of mu-

cous membrane which covers internal piles, and which is the source of their excessive irritability and hæmorrhage. The pile having been protruded, its surface is to be smeared with a smooth wooden stick dipped in the concentrated acid; and then pure olive oil is to be applied in order to prevent the caustic being too widely diffused. The subsequent treatment is the same as after extirpation by the ligature; and when the slough caused by the acid separates, the surface generally cicatrises speedily, and leaves the part braced up by its contraction.—*Mr. Druitt.*

#### NEW METHOD FOR THE RADICAL CURE OF HYDROCELE.

At the seance of the Academie de Medicine, 28th November, a letter was read from M. Guillon, on a new method for the radical cure of hydrocele. It consists in introducing into the tunica vaginalis a very small flexible bougie long enough to form several spiral folds in the cavity; and keeping it there till pain and inflammation come on.

The following is the manner in which M. Guillon, performs the operation. He plunges a trocar into the bottom of the tumor; and when about half the liquid has escaped, he introduces the bougie through the canula into the sac, and causes it to form two or three spiral folds in its interior, so as to distend it greatly. He generally lets it remain about eighteen hours, or at least till pain and swelling come on.

*Prov. Med. and Surg. Journ.*

#### EFFECTS OF A LARGE DOSE OF QUININE ADMINISTERED BY MISTAKE.

By JOHN M. DEERE, M. D.

In November, 1841, a young lady, aged eighteen, of a delicate constitution and nervous temperament, was under the treatment of a medical friend of mine for severe hysterical symptoms. Almost every evening she had repeated fits—epileptic in appearance, although decidedly hysterical in character. The remedy administered was quinine, in combination with sulphuric acid; she began with six grains per diem, which was soon increased to ten, and afterwards to twenty. When she had been taking the medicine for about a fortnight, she received a six ounce bottle, containing six drachms of quinine in solution, with an ounce and a half of the dilute sulphuric acid; of which she was directed to take one teaspoonful at a dose, in a wineglassful of water. Not regarding the directions, however, she poured out a wineglassful—about one-third of the bottle—and swallowed it.

Her first impression was one of extreme acidity of the mouth, and a most disagreeable sensation about the teeth. This was followed by nausea and extreme giddiness, and tendency to stupor. Her friends, believing that she had taken a narcotic poison, insisted on making her walk up and down, after the manner generally recommended for narcotic poisoning. After this had been kept up some time, the stupor abated, and she passed into a state of semi-consciousness, with the feeling as if she was obliged to keep moving in spite of herself. She was intensely thirsty, and drank a great deal of water. But all the bad symptoms gradually subsided without medical aid, and the epileptic fits, which were the occasion of the treatment, did not appear for a very long time afterwards. Her catamenia were brought on immediately.—*Prov. Med. Journ.*, Dec. 23, 1843.